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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,186	03/24/2004	Masaki Kinoshita	250838US-2CONT	2532

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EXAMINER	
KIM, RICHARD H	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,186	KINOSHITA ET AL.	
	Examiner	Art Unit	
	Richard H. Kim	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *9-19 and 21-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/24/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the Election/Restriction requirement in the reply filed on 3/24/04 is acknowledged. The traversal is on the ground(s) that an examination of the plurality of species would not cause a serious burden on the examiner. This is not found persuasive because the search of the elements of the claimed inventions distinct to each species would necessitate a search in multiple subclasses. A search in multiple subclasses of distinct species places a serious burden on the examiner, regardless of whether the search is done electronically or not.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamoi et al. (US 6,262,787 B1) in view of Hanata et al. (US 6,812,974 B1).

Referring to claim 1, Kamoi et al. discloses a display apparatus having an optical material between a pair of substrates, and having a plurality of display pixel sections (Fig. 1, ref. 13),

wherein each of the substrates as a film that is attached to an outer surface of the substrate (Fig. 2, ref. 3) and has a thickness greater than a thickness of the glass substrate (col. 3, line 56), at least one of the films is formed of a polarizer plate (Fig. 1, ref. 13). However, the reference does not disclose that the substrates has a glass substrate and permits bending of the display apparatus.

Hanata et al. discloses a device wherein the substrates have a glass substrate and permits bending of the display apparatus (col. 5, lines 12-18).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a glass substrate and permits bending of the display apparatus since one would be motivated to prevent the formation of a distortion pattern in the liquid crystal device (abstract).

Referring to claim 2, Kamoi et al. and Hanata et al. disclose the device previously recited, but fails to disclose that the thickness of the glass substrate is .15 mm or less.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the thickness of each of the glass substrate to be .15 mm or less since the thickness of a substrate is a result effective variable based on the flexibility. Hanata et al. discloses that the glass substrate is " thin" (col. 5, line 15), implying that it is desirable that the glass substrate to be be sufficiently thin to enable flexibility.

Referring to claim 3, Kamoi et al. and Hanata et al. disclose the device previously recited, but fails to disclose that the display apparatus is bendable with a radius of curvature of 200 mm or less.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the radius of curvature to be 200 mm or less since one would be

motivated for the radius of curvature to be such to sufficiently small in order to enable sufficient flexibility.

Referring to claim 4, Kamoi et al. discloses the device wherein the optical material is a liquid crystal composition (Fig. 1, ref. 13).

Referring to claim 5, Kamoi et al. and Hanata et al. disclose the device previously recited, but fails to disclose that the optical material is an EL material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the optical material to be an EL material since Applicant has disclosed that the optical material can have multiple embodiments. Therefore, the material in which the optical material is comprised of is not an essential feature of the invention.

3. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamoi et al. and Hanata et al. in view of Ando et al. (US 6,356,330 B1).

Referring to claim 6, Kamoi et al. and Hanata et al. disclose the device previously recited, but fails to disclose that the device includes spacers disposed between the pair of substrates, the spacer being fixed on at least one of the substrates.

Ando et al. discloses a device comprising spacers disposed between the pair of substrates, the spacer being fixed on at least one of the substrates (Fig. 3, ref. 301).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ spacers disposed between the pair of substrates, the spacer being fixed on at least one of the substrates since one would be motivated to improve the cell gap (col. 5, line 34).

Referring to claim 7, Kamoi et al. and Hanata et al. disclose the device previously recited, but fails to disclose that each of the display pixel section includes a TFT and a pixel electrode, which are formed on one of the glass substrates.

Ando et al. discloses the device wherein each of the display pixel section includes a TFT and a pixel electrode, which are formed on one of the glass substrates (Fig. 3, ref. 106, and 216).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a TFT and a pixel electrode, which are formed on one of the glass substrates since one would be motivated to control the liquid crystal element, creating a display.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamoi et al, Hanata et al., Ando et al., in view of Yamauchi et al. (US 6,512,504 B1).

Kamoi et al., Hanata et al. and Ando et al. disclose the device previously recited, but fails to disclose that the TFT includes a p-Si film.

Yamauchi et al. discloses a device wherein the TFT includes a p-Si film (col. 1, lines 17-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the TFT to include a p-Si film since one would be motivated to operate at high speeds since they have high field effect mobility (col. 1, lines 17-27).

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraishi et al. (US 6,335,771 B1) in view of Kamoi et al.

Hiraishi et al. discloses a device comprising a display panel configured to hold a liquid crystal layer between an array substrate and a counter substrate (Fig. 1, ref. 1a, 1b, 16); and a backlight unit that illuminates the display panel (col. 3, line 10), wherein the array substrate includes: a first light-transmissive insulation substrate (Fig. 1, ref. 1a); a signal line and a scan line that are disposed to be substantially perpendicular to each other on one of the major surfaces of the first light-transmissive insulation substrates (Fig. 2, ref. 2, 3); a switch element disposed near an intersection of the signal line and the scan line (Fig. 2, ref. 5); and a pixel electrode connected to the switch element (Fig. 1, ref. 14), the counter electrode includes a second light-tranmissive insulation substrate (Fig. 1, ref. 1b); and a counter electrode disposed on one of the major surfaces of the second light-transmissive insulation substrate so as to face the pixel electrdoe (Fig. 1, ref. 16). However, the reference does not disclose polarizer plates disposed respectively on the other major surfaces of the first light-transmissive insulation substrate, the polarizer plates having thicknesses greater than those of the first light-transmissive insulation substrate and the second light-transmissive insulation substrate.

Kamoi et al. discloses polarizer plates disposed respectively on the other major surfaces of the first insulation substrate, the polarizer plates having thicknesses greater than those of the insulation substrate and the second insulation substrate (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ disclose polarizer plates disposed respectively on the other major surfaces of the first light-transmissive insulation substrate, the polarizer plates having thicknesses greater than those of the first light-transmissive insulation substrate and the second light-

transmissive insulation substrate since one would be motivated to prevent the formation of a distortion pattern in the liquid crystal device (abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER